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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,832	12/20/1999	ATSUSHI ISHIKAWA	P7443-9012	1639

32294 7590 07/02/2003

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EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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7590 01/30/2002

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# Office Action Summary

Application N .

09/466,832

Applicant(s)

ISHIKAWA, ATSUSHI

Examiner

Lilybett Martir

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraoka (Pat. 5,371,450) in view of Hiraoka (Pat. 5,912,025). Hiraoka (Pat. 5,371,450) teaches all the elements present in the controller of the claimed invention and a method of using the same, including:

- A first sensor as in element 25 to detect a relative position, a target value generator as in element 24-2 that generates a target value between the movable platen and the fixed platen as a target platen position value and generating a target force value, and a control unit as in element 30 (Col. 6, lines 20-23) for calculating a position deviation and a deviation to selectively control a motor as in element 11, as in claim 1.
- A subtracting unit as in elements 24-3 and 24-5 for subtracting the detected platen position and the detected force to produce position deviation and the deviation values, a switch s in element 51 used to selectively produce the position deviation and the mold deviation, and a generating unit as in element 24 that generates control command values for the motor as in element 11 to the selected deviation, as in claim 2.

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- A first subtractor as in element 24-3 for subtracting the detected platen position, a second subtractor as in element 24-5 for subtracting the detected mold clamping force, a platen position compensation unit as in element 24-4, a force compensation unit as in element 30-2, and a switch as in element 51 to selectively supply and produce the command and deviation values, as in claims 3-4.
- A target value switch as in element 51, a detected value switch as in element 51, a subtractor as in element 30-1, a platen position and a force compensation unit as in element 30-2, as in claim 5.
- A platen position, with first and second control command values (Col. 8, lines 26-27) and a motor control unit as in element 30 for drivingly controlling a motor as in element 11, as in claims 6,7,8 and 9.
- A platen position with first and second control command values (Col. 8, lines 26-27) an injection molding machine (Col. 3, lines 52-55) with a screw as in element 12 for injecting molten resin, and a control device as in element 30 for drivingly controlling a motor as in element 11, as in claims 10,11,12 and 13.

But he does not disclose:

- A mold clamping system, as in claims 1-13
- A second sensor 18 to detect a mold clamping force, as in claim 1.
- A method of controlling the mold clamping control device as in Claims 14-26.

Hiaroka (Pat. 5,912,025) discloses a control device that has a sensor as in element 32 for use in sensing the clamping force generated by a mold clamping system.

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as in element 10 (Col. 2, lines 42-55), therefore controlling a motor as in element 16 that moves a platen as in element 13.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Hiraoka's (Pat. 5,371,450) invention using his own teachings (Pat. 5,912,025) by providing a sensor for sensing a force generated by a mold clamping system, for the purpose of furnishing means for controlling a mold clamping motor, and by adapting features from his own controller in Pat. 5,371,450 into Pat. 5,912,025 to be used in combination with a mold clamping system, for the purpose of controlling the process of mold clamping and mold clamping forces therefore reducing the production of defective articles.

Regarding method claims 14-26, said claims exist as an essential constituent or characteristic of the claimed invention and therefore are inherently disclosed in the teachings of Hiraoka.

### ***Response to Arguments***

Applicant's arguments filed October 15, 2001 have been fully considered but they are not persuasive. The use of a known device that comprises all the elements required to perform the functions of a control system in a known injection molding device that comprises a mold clamping system is not germane to the issue of patentability of the device itself.

In response to applicant's argument that the combination of Hiraoka's teachings destroy the intended function of the claimed invention, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, control units are known to be used in both injection molding and mold clamping devices, as noted in the teachings of Hiraoka, and therefore the cited references are analogous by nature.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Citation of Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Faig et al. (Pat. 5,362,222) Injection molding machine having a vector controlled AC drive system.
- Allen (Pat. 4,131,596) Sensing system and method for plastic injection molding.
- Hold et al. (Pat. 3,870,445) Injection molding machine controls.
- Hiraoka (Pat. 5,844,391) Device for controlling the clamping force of a motor-driven injection molding machine.



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- Ishikawa (Pat. 6,157,158) Mold clamping control apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir  
Examiner  
Art Unit 2855



January 25, 2002



Benjamin R. Fuller  
Supervisory Patent Examiner  
Technology Center 2800